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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,583	12/05/2005	Hyung-Pyo Yoon	0630-2354PUS1	4339
2292 7590 07/10/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER MOK, ALEX W	
			ART UNIT 2834	PAPER NUMBER
			NOTIFICATION DATE 07/10/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/539,583

Applicant(s)

YOON, HYUNG-PYO

Examiner

Alex W. Mok

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 April 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 4/10/07.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Amendment

1. Acknowledgement is made of Amendment filed April 10, 2007.
2. Acknowledgement is made of the Information Disclosure Statement and foreign references submitted in the Amendment filed April 10, 2007.

Drawings

3. The drawings were received on April 10, 2007. These drawings are acceptable.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Song et al. (US Application Publication No.: US 2002/0135264 A1), and further in view of Park (US Application Publication No.: US 2002/0105247 A1).

Song et al. discloses a reciprocating motor having an outer stator (reference numeral 10, see figure 5B) with a plurality of radially stacked first lamination sheets (reference numeral 11) around the bobbin (reference numeral 50, see figure 5A) in which a winding coil (reference numeral 30) is wound (see figure 5A, 5B); an inner stator (see figure 5B) disposed in the outer stator at a certain air gap from an inner

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circumference of the outer stator, and having a plurality of radially stacked second lamination sheets (see figure 5B); a magnet paddle (reference numeral 40, see figure 5B) disposed between the outer stator and the inner stator, and having a plurality of magnets (reference numeral 41) installed at a circumference thereof (see figure 5B); and a terminal part (reference numeral 52) provided at one side of the outer stator for connecting an external power to the winding coil of the outer stator.

For claim 1, Song et al. differs from the claimed invention in that the motor is not taught to have a “magnetic force balancing part”.

For claims 2 and 3, Song et al. differs from the claimed invention in that the “magnetic force balancing part” is not taught to have the same shape mentioned in claim 2, nor is it taught to have the same sectional area mentioned in claim 3, as the terminal part.

For claim 4, Song et al. differs from the claimed invention in that the “magnetic force balancing part” is not taught to be integrally formed with the bobbin.

Park, however, teaches a reciprocating motor having a plurality of unit stacked core members (each formed by a plurality of lamination sheets) that are separately positioned from each other around the outer circumference of the bobbin (see figure 4, and paragraph [0027]).

It would have been obvious to one of ordinary skill in the art to have the lamination sheets of the motor of Song et al. be separated, just as the core members are separated in the invention of Park, and thus forming the “magnetic force balancing part”, which is inherently integrally formed with the bobbin (and inherently be the same

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shape and sectional area as the terminal part), since such a technique would have logically commended itself to an inventor's attention in making the electromagnetic field formed between the inner and the outer stator of the motor uniform.

Also, for claim 6, to have used the technique of disposing the "magnetic force balancing parts" at the same intervals on the basis of the terminal part on the circumference of the outer stator in the motor of Song et al. would have been obvious to one of ordinary skill in the art, since Park illustrates the unit stacked core members to be disposed at the same intervals around the outer circumference of the motor (see figures 4, 5, and 7).

For claims 5, 7, and 8, these intervals as mentioned above encompass the intervals of 180 degrees, 120 degrees, and 90 degrees, respectively.

For claims 9 and 12, since it would have been obvious to make the magnetic force balancing part the same shape and sectional area as the terminal part as explained for claims 2 and 3 above, this configuration would already make the magnetic force balancing part occupy the partial portion of the inner circumference of the bobbin such that the lamination sheets of the outer stator are disconnected to form a gap at the inner circumference of the bobbin (claim 9), i.e. the magnetic force balancing part surrounds a partial portion of the bobbin and covers the inner circumference of the bobbin (claim 12).

For claims 10 and 11, since it would be obvious to have the magnetic force balancing parts disposed at the same intervals in a circumferential direction of the outer stator as in claim 6, this would essentially divide the lamination sheets of the outer

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stator into at least a first group and second group, with the groups being spaced apart by the gap occupied by the magnetic force balancing part (claim 10) or the gap occupied by the terminal part (claim 11). Having the first lamination sheets of the groups align along a diametric direction of the outer stator would be obvious to a person skilled in the art since this configuration would be ideal for the purposes of having a more uniform electromagnetic field.

For claim 13, since it would be obvious to make the terminal part and the magnetic force balancing part have the same shape and sectional area as explained for claims 2 and 3 above, this would essentially make the magnetic force balancing part protrude at the outer side of the bobbin, since the terminal part has the same configuration (see figures 5A, 5B of Song et al.).

Response to Arguments

6. Applicant's arguments filed April 10, 2007 have been fully considered but they are not persuasive.

7. In response to applicants' argument that the combination of Song et al. and Park will have the resultant lamination sheets in each of the core members of Park become "parallel stacked lamination sheets" instead of the lamination sheets being "radially stacked", the examiner respectfully disagrees. Even though the lamination sheets of Park are shown to be parallel, a person of ordinary skill in the art can still apply the lamination sheet free sectors of Park in the reference of Song et al. and still maintain

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the radial stacking of lamination sheets as shown by Song et al., i.e. a lamination sheet free sector having the same shape as the terminal part of Song et al., for the purpose of forming an electromagnetic field between the outer stator and the inner stator that is more uniform. Claims 9-13, which were added in Amendment filed April 10, 2007, are now rejected under 35 U.S.C. 103 as explained in this action above.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alex W. Mok whose telephone number is (571) 272-9084. The examiner can normally be reached on 7:30-5:00 Eastern Time, 1st Friday off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren E. Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Alex W. Mok
Examiner
Art Unit 2834

A.M.


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